HORMONE



AGENDA

1-Gonadotrophin containing products

2-GnRH Analogous

3-Insulin & oral Hypoglycemic

4-Systemic Corticosteroid

5-Contraceptive

6-Prolactin Hormone

7-Osteoprosis





Gonadotropin containing products

Gonadotropin hormone :

The name is due to secreted from gonadotropin cell in the anterior pituitary gland & its role on gonads

Gonadotropin hormone are FSH &LH

Gonadotropin hormone roles :

FSH stimulate gametogenesis & follicular development in female

FSH stimulate spermatogenesis in men





Gonadotropin containing products

Gonadotropin hormone roles :

L.H stimulate androgen production by follicle
L.H induce ovulation

FSH stimulate androgen conversion to estrogen

The drugs include different group as HMG,HCG,….





Gonadotropin containing products

1-HMG (Human menopausal gonadotropin)

Drug its source is urine of postmenopausal women
HMG include containing FSH & LH

By same conc. (75 IU)extracted from postmenopausal urine

Example:Menogon ,Merional ,Humegon







Gonadotropin containing products

1-HMG (Human menopausal gonadotropin)

Urofollitropin drug containing FSH

Extracted from postmenopausal urine but purified extraction
i.e. free from LH

Ex. Metrodin ,Fostimon , Brevella







Gonadotropin containing products

1-HMG (Human menopausal gonadotropin)

Synthetic follitropin drugs containing only FSH

But RNA or DNA recombinant gives FSH

FSH of glucoprotein series of Alfa or Beta subunit

Ex.Gonal-F (Alfa Follitropin)



Puregon (Beta Follitropin)







Gonadotropin containing products

1-HMG (Human menopausal gonadotropin)

Main application is treatment of infertility

In course 7-12 days (daily use) from 75 to 300 IU
Till follicle development may above 14 mm

In vivo fertilization
In vitro fertilization (تستعمل في الحقن المجهري)
Semen invade itself (طفل انابيب)
Semen invade by injection (حقن مجهري)





Gonadotropin containing products

2-HCG(Human Chorionic Gonadotropin)

Drug is extracted from urine of pregnant women where it is secreted from placenta give identical LH
Ex.Profassi ,Pregnyl ,Chorioman



Half life 8 hours
Synthetic DNA recombinant as ovitrelle

The application clinically:

1-Induce ovulation most use 5000IU SC,IM
2-Luteal phase is maintained with 1500 IU every 3 days for 12 days
3-Undescended testicle 500 IU 3 times/week for 6 weeks
4-Hypogonadism



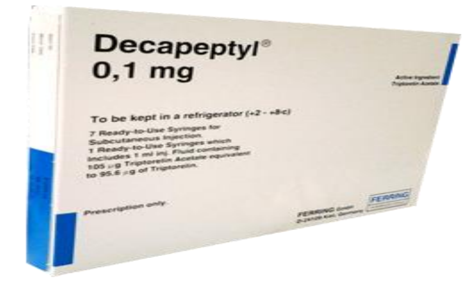


GnRH analogous or Gonadorelin or Cytostatic GnRH analogous

Ex.Triptorelin (Decapeptyl)
Buserelin (Syperfact)
Goserelin(Zoladex)

This group of drugs act as Stimulation in deficiency cases or Inhibition by negative feed back mechanism
Ex.in over secretion cases due to cancer problem

Decapeptyl injection available in :
Aqous form (7 syringe 0.1)mostly prescribed once daily SC or IM most case is infertility
Depot form (one syringe 3.75)



One injection IM every month most used in prostatic cancer
If the conc. increase to 22.5 mg will be used every 84 -90 days but if conc. is 30mg will be used every 4 month





GnRH analogous or Gonadorelin or Cytostatic GnRH analogous

Ex.For stimulation application

1-Infertility
2-Delay puberty
3-Hypogonadism

Ex.For inhibition (suppression effect)

1-Prostatic cancer
2-Endometriosis (تدعي البطانه المهاجره وهي مثل الوحمه تتكون في اي مكان)
3-Uterine Fibroids
4-Early puberty (central precocious puberty)

Cetrotide 0.25 mg = Cetrorelaxin acetate

Action of cetrotide is inhibition of LH .RH
Therefore used to prevent premature ovulation
Which is undesirable during hormonal treatment





Insulin

Definition :

Insulin is poly peptide hormone consisting of 2 peptide chain Connected by disulfide bonds

Secretion :

Insulin secreted by beta cell of pancreas (islet of Langerhans)

Regulation the secretion of insulin through:

1-Blood glucose level
2-Incretin intestinal hormone





Insulin

Sources of insulin :

1-Extraction insulin from pork (pig),beef (cow)

2-Human insulin is produced by DNA technology
using special strains of E.coli or Yeast

3-Recombinant human insulin analogue
this new generation of insulin produced by modification of amino acids sequence of human insulin or change in some amino acid &produce insulin with different pharmacokinetics properties as short duration & faster onset





Insulin

Ex. Short duration & rapid onset recombinant insulin

Lispro (lysine & proline)
Aspart insulin (aspartic acid & proline) Novorapid
Glulisine insulin (Apidra)

Ex. Long duration & slow flat level (no peak)

Glargine insulin (Lantus)
Detemir insulin (Levemir)

Insulin administration :

Insulin is polypeptide hormone degraded by gastric juice
Therefore insulin administration through sc injection
But short acting regular insulin can be used iv injection in emergency
As Hyperketoacidosis ex.Actrapid ,HumulinR ,….





Insulin

Adverse effect of insulin :

1-Hypoglcemia

2-Weight gain

3-Allergic reaction but human insulin its side effect decreased

4-reaction at site of injection (Lipodestrophy)
i.e. Lipodestrophy lead to hypertrophy or hypotrophy

N.B Renal insufficiency may require to adjust the dose





Insulin

Insulin preparation in the pharmacy :

According to duration of action & according to the company & it is turbid or clear insulin

1-According to duration of action :

Regular = Body insulin = Short acting insulin

Rapid acting insulin = Ultra short insulin

Intermediate (NPH) = Isophan insulin

Long acting insulin

Mixed insulin





Insulin

Type of insulin	Regular Insulin	Rapid acting Insulin
Definition	Soluble crystalline insulin named body insulin	Ultra short insulin
Onset	30 min – 1 hr.	10 – 20 min
Peak	3 – 4 hrs.	1 – 2 hrs.
Duration	7 – 8 hr.	2 – 5 hrs.
Prescribed as	Before meal	Before meal or after meal direct(bolus)
Example	Actrapid , HumulinR	Novo rapid ,Humalog Lispro , Apidra





Insulin

Type of insulin	Intermediate Insulin (NPH)	Long Acting Insulin
Definition	NPH ..Neutral protamine hagedon Isophane insulin is soluble crystalline combined with protamine at neutral ph (suspension turbid insulin)	Long duration without peak but prolonged flat level
Onset	1 – 2 hrs.	
Peak	4 – 8 hrs.	No peak
Duration	12 hrs. Intermediate because of its conjugation with protamine	Lantus …24 hrs. Levemir …18-24 hrs.
Prescribed as	Twice daily	Basal insulin
Example	Insulatard , Humulin N	Lantus , Levemir





Insulin

Lantus	Levimer
Long duration of action due to isoelectric point of insulin galrgine is lower than that of human insulin which leading to clear insulin in vial but precipitation at site of injection There fore extend its action & has flat prolonged hypoglycemic effect & also due to change in sequence of amino acids series	Long duration of action due to addition of the fatty acids side chain which enhance association to blood albumin ,then slow dissociation from albumin result in long acting effect also change in sequence of amino acid series





Insulin

Insulin combination (mixed insulin):

Biphasic insulin is combination of intermediate insulin With short acting insulin

i.e. give the 2 effect rapid onset , short acting effect & Intermediate effect therefore prescribed every 12hrs.

Ex. Maxitard ,humulin 70/30,Novomix ,Humalog mix ,…..













Insulin

Insulin also classifed according to company & insulin is turbid or clear

Clear Insulin

1-Novonordesk company:

Actirapid
Novorapid
Levemir







2-Lilly company :

HumulinR
Humalog Lispro



3-Aventis company:

Apidra
lantus









Insulin

Turbid Insulin

1-Aventis company:

No turbid insulin

2-Lilly company:

Humulin N
Humulin 70/30
Humalog Mix

3-Novonordesk :

Insultard
Mixtard
Novomix





Insulin

Different packing

Vial





Penfill (cartidge)



Disposable pen (flexipen ,solostar , …..)









Oral Hypoglycemic

Oral hypoglycemic is classified into 5 groups

1-Insulin Secretagogue
Include sulphonyl urea & meglitinide

2-Insulin Sensitizer
Include thiazolidinedione & biguanide

3-Alpha Glycosidase Inhibitor
Include Acarbose

4-DPP-IV Inhibitor

5- Incretin mimic drug
Include victosa







Oral Hypoglycemic

Insulin Secretagogue:

1-Sulphonyl urea

Official dose once or twice before meal
Diamicron MR (Gliclazide),Amaryl (Glimipride)……used once daily





Daonil (Glibenclamide),Minidiab (Glipized , more suitable for kidney)…..twice daily

Main side effect of sulphonylurea

Hypoglycemia
Weight gain

Precaution with hepatic & renal insufficient



Oral Hypoglycemic





Oral Hypoglycemic

Insulin secretagogues

2-Meglitinide

Same action of sulphonyl urea but suitable for sulphonyl urea sensitivity patient & kidney insufficient patient, as Repaglinide (Novonorm 0.5,1,2)
Rapid onset , short duration

So that consider postprandial glucose regulator

It combined with metformin or pioglitazone but not with sulphonyl urea
Offical dose before or with meal 3 time daily

Side effect

Similar to sulphonyl urea but less severity





Oral Hypoglycemic

Insulin Sensitizer

1-Thiazolidindione

As pioglitazone (Actos)
Official dose once daily



Side effect

Edema
Headache
Risk hepatotoxicity in first 14 days
Hemolytic anemia

Delisted drug …..rosglotisone (Avandia) ….arrhythmia





Oral Hypoglycemic

Insulin Sensitizer

2- Biguanide as metformin



Mechanism of action :

1- Decrease glucose absorption
2- Decrease hepatic glucose production
3- Increase peripheral utilization of glucose



Official dose 3 times except XL twice after meal

Different application :

1- Blood glucose level regulator in diabetic patient
2- Slimming ….good choice of obese diabetic patient
3- Used in polycystic ovary

Side effect of metformin :

1- GIT disturbance   2- Headache
3- In over dose may lead to lacto acidosis



Deficiency of vit b12

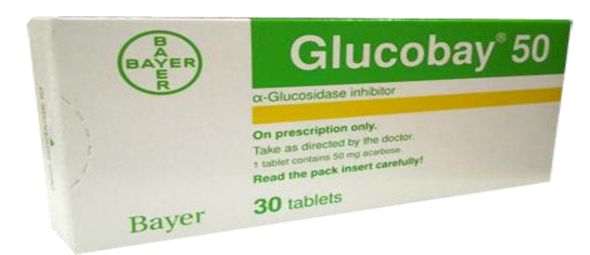


Oral Hypoglycemic

Alpha glycosidase inhibitor

Lead to inhibit glucose absorption as acarbose (Glucobay 50 , 100)

Official dose 3 times before meal



<u>Different application :</u>

1- Decrease blood glucose level in diabetic patient
2- Slimming

<u>Main side effect :</u>

1- Flatulence
2- Mild diarrhea





Oral Hypoglycemic

DPP-IV Inhibitor drug

Di peptidyl peptidase no. IV inhibitor drug

Sitagliptin (Januvia)



Sexagliptin (Onglyza)



Vildagliptin (Galvus)

These drugs inhibit incretin intestinal hormone (GLP , GIP) break down
Which potentiate insulin secretion & suppress of glucagon secretion by pancreas
Lead to hypoglycemia effect
Official dose once daily with or without meal

<u>Main side effect :</u>
Pancreatitis , hypoglycemia , peeling , redness of skin



Oral Hypoglycemic

Incretin mimic drug

Include Liraglutide (Victosa) , Exenatide (Byetta)

works in 3 ways to lower blood sugar

works like the hormone GLP-1 to:

Slow food leaving your stomach

Help prevent your liver from making too much sugar

Help the pancreas produce more insulin when your blood sugar levels are high

While not a weight-loss product, may help you lose some weight

Medical studies showed that most people taking lost some weight. The American Diabetes Association recommends weight loss as an important goal for overweight people with type 2 diabetes.





Oral Hypoglycemic

Combination oral hypoglycemic

1- Glibenclamide & Metformin
Ex. Glucovance , Daonil M Ex.



2- Vildagliptin & Metformin
Ex.Galvusmet



3- Sitagliptin & Metformin
EX. Janumet







Systemic Corticosteroid

Corticosteroid classify according to duration of action

Short duration of action

Duration of action : 4-6 hrs.
Frequency of dose: 3 times daily after meal

Include : hydrocortisone , prednisolone (prednisolone 5mg / tab , predo 15 mg / 5 ml)
Methyl prednisolone (Medrol , Urbasone)







Systemic Corticosteroid

Corticosteroid classify according to duration of action

Long duration of action

Duration of action : 8-12 hrs.
Frequency of dose : twice daily after meal
Include : dexamethasone 4 mg (Oradexon), betamethasone 0.5 mg (Betasone)







Systemic Corticosteroid

Inhalation (Surface Active Effect Corticosteroid)

Include the following

Beclomethasone (Beclasone , Rhinoclinil , …..)

Budesonide (Pulmicort , Symbicort , Rhinocort aqua, …)

Fluticasone (Flixotide , Seretide , Flixonase , ….)

Ciclesonide (Alvesco ,….)

Patient Education :

All inhalation or SAE corticosteroid must advice by mouth wash

After using it to decrease (oral candidiasis , sound hoarseness)





Systemic Corticosteroid

Corticosteroid classify according to dosage form into

Tablet , surface active effect , supp., parenteral

Supp. As budesonide supp used for ulcerative colitis disease

Parenteral corticosteroids used in acute life style threating condition

Life threating condition :

As acute sever asthma ,sever allergy(urticarial , transfusion reaction)

Parenteral corticosteroid include :

Hydrocortisone (Solucortef , Hydrocortisone amp.)

Methyl prednisolone (Solu medrol , Depo medrol)

Dexamethasone (Decadron , Dexamethasone , Forticortin)

Triamcinolone (Kenacort) Betamethasone (Diprofos)



Systemic Corticosteroid

Diprofos

Dosage form : parenteral corticosteroid

Active ingredient : betamethasone diphosphate , betamethasone dipropionate

Duration : betamethasone diphosphate ….rapid onset , short duration
betamethasone dipropionate …late onset , long duration

Frequency of dose : may be above 3 months , at least one month







Systemic Corticosteroid

Tetracosactide or Tetracosactrin (Synacthen depot)

Synthetic polypeptide identical in first part series of amino acid to corticotrophin (ACTH)

Synacthen stimulate the adrenal cortex to secret the natural cortisol

Indication : **mainly diagnosis of adrenal cortex insufficiency or to detect the adrenal cortex function**

Side effect : **rarely occur as the following**
Redness at site of injection , rash , itching , flushing . Dizziness , nausea , difficult breathing , swelling of face , lip & tongue







Systemic Corticosteroid

Role Of corticosteroid

Potent anti-inflammatory through inhibition of prostaglandin synthesis through inhibition of arachidonic acid formation

Inhibition the release of already formed prostaglandin

Inhibition of cytokines & other allergens

Inhibition of interleukin formation by monocyte

Increase synthesis of B-Adrenergic receptor with the resultant increase in catecholamine activity





Systemic Corticosteroid

Role Of corticosteroid

Relative potency of different drugs has corticosteroid

N.B.

Hydrocortisone & aldosterone are principal hormones normally produced by adrenal cortex
Hydrocortisone (Cortisol) has the following effect
Glucocorticoids ….anti inflammatory effect
Mineralocorticoids ….salt retaining effect

The potency for anti inflammatory effect where prednisolone 5 time as hydrocortisone
While the sod. Effect is slightly less than of hydrocortisone (about 0.8)

Dexamethasone & betamethasone anti inflammatory effect is 50 times as that of hydrocortisone while sod. Retaining is negligible





Systemic Corticosteroid

Side effect of prolonged steroid therapy

Short term of steroid for few days 3-5 days no side effect but prolonged use as the following

1- Growth retardation especially in child growing

2- Cushing syndrome (buffalo & hump ,moon face , hirsutism , acne , …)

3- Hypertension

4- Potassium depletion

5- Wasting of the muscle

6- Osteoporosis





Systemic Corticosteroid

Other side effect corticosteroid

1- Salt Retention (Edema , Weight gain)

2- Flaring of Infection (Bacterial , Viral , ….)

3- Peptic Ulcer

4- Sudden Withdrawal after prolonged use lead to acute adrenal failure

5- Hyperglycemia

6- Immunosuppressive Effect





Systemic Corticosteroid

Patient Education , Precaution & Counselling

Mainly for patient used corticosteroid for long time



1- High protein diet to prevent muscle wasting

2- High calcium supplementation to prevent osteoporosis

3- High supplementation of vit. B , vit . D due to deficiency by long term of corticosteroid

4- Fresh orange , banana juice or pot. Supplementation or ORS to Compensate pot. Depletion (Hypokalemia)





Systemic Corticosteroid

Other counselling for long term of corticosteroid

1- Infection should be diagnosed early to be treated

2- protect the stomach by using corticosteroids after meal or using H2 blocker or PPI

3- Periodic monitoring of blood pressure , blood glucose , growth (length) specially In children , weight gain

4- Sudden withdrawal should be avoided

Other precaution

1- Corticosteroid regimen gradually increase & gradually decrease

2- Can alternative day therapy or every other morning dose 6-8 a.m every other day

N.B Hyperkalemia more dangerous than hypokalemia therefore the advise is ORS or fresh juice specially banana juice

Contraceptive

Oral contraceptive prescribe from specialist but we have important role in counseling & advice

Starting The Pill:

One common way is to start on the first day of the period when the women use oral contraceptive first time or the first day after an abortion
but women used pills before can be start after 7day from last box
always remembers when occur any disturbance in taking the pills must advice using of other methods of control as condom , local spermicidal tab

Continuing :

Take one pill every day until you finish an entire pack.

Try to link taking The Pill with a regular activity that you do at the same time every day, like eating a meal or brushing your teeth.

If you have a 28or more -day pack, start a new pack immediately after you finish the old one.

If you have a 21-day pack, take one pill every day for 21 days, no pills for 7 days, then start the new pack immediately.

Contraceptive

Cautions

Women who are over 35 and smoke or who have any of the following conditions should not take The Pill:

History of heart attack or stroke

Blood clots

Unexplained vaginal bleeding

Known or suspected cancer

Known or suspected pregnancy

Liver disease

Women who are under 35 and smoke, have migraines, & gallbladder disease, hypertension
, diabetes, epilepsy, sickle cell disease, elective surgery, a history of blood clots
, liver or heart disease may not be able to take The Pill.

Your clinician or doctor where women who use The Pill have a higher risk of heart attack and stroke





Contraceptive

Side Effects & Disadvantages

As the body adjusts to hormonal changes created by The Pill women often experience some minor side effects, including:

Irregular bleeding or spotting

Nausea

Breast tenderness

Weight gain and/or water retention

Spotty darkening of the skin

Mood changes





Contraceptive

Side Effects & Disadvantages

Does not protect against sexually transmitted infections, including HIV/AIDS.

Must be taken every day.

Less effective when taken with some drugs.

Raised risk of heart attack and stroke.

Side effects usually disappear after 2-3 cycles. If the side effects still after 2-3 cycles or if heavy bleeding occurs, referred to specialist





Contraceptive

Advantages

Periods may be lighter or more regular.

Easy to use.

Does not harm future fertility.

May protect against uterine and ovarian cancers.

Has other use as development of secondary character of women , to regulate the period

May reduce acne.

Can be used for Emergency Contraception.





Contraceptive

Future Fertility

Women who want to become pregnant may stop using The Pill at any time. Fertility may return immediately or after a few months (6 – 9)

Drug Interactions

The effectiveness of the Pill is lowered when taken with certain medications, including antibiotics, anti-seizure, tuberculosis, and migraine medications. If you are taking any medications, must use other method , like condoms and spermicidal. As with all drugs





Contraceptive

Danger Signs

Women who experience any of the following symptoms while taking The Pill should call the clinic immediately:

Abdominal pains (severe)

Chest pain or shortness of breath

Headaches (severe)

Eye problems, such as blurred vision

Severe leg or arm pain or numbness





Contraceptive

Missed Pills: Late Start

The most common way women get pregnant while using The Pill due to **starting late**.

1 day late starting the next package: Take 2 pills as soon as you remember and one pill each day after. Use a backup form of birth control as condom for two weeks.

2 days late starting the next package: Take 2 pills per day for 2 days, then continue as usual. Use a backup form of birth control for two weeks.

Missed Pills: During the Cycle

1 Pill missed: Take it as soon as you remember and take your next pill at your usual time.
This may mean taking two pills in one day.
if missing in 1st week must use other method as condom
but in the 2nd week use the pills only
but in 3rd week stop & begin after 7 day new box





Contraceptive

Missed Pills: During the Cycle

2 pills missed in a row in the first two weeks:

Take two pills on the day you remember and two pills the next day

Finish the rest of the pack as usual

Use other method as condom for one week at least

2 pills missed in a row in the third week:

stop & begin after 7 day new box

but must be test the pregnancy if there is no period

Other method for missed pills

If forget less than 12 hour will take the tab. only

If forget for 24 hour take the tab. & use other method as condom

If forget for 48 hour must be stop 7 day & begin new cycle with new box





Contraceptive

One type hormone of oral contraceptive (Progesterone)

Breast feeding women =mini pill=nursing pill

Ex. Cerazzete , microlut
must be taken 30 day after birth & not stop at all
if forget this type for more than 3hour must use other method for 2 week at least
If occur vomiting or diarrhea depend on the number of hours from taking of pills

Mechanism:
Increase viscosity of cervical mucous
Some non-ovulatory effect (cerazzete)
Cerazzete sometimes used in obese ,smoking & epilepsy patient









Contraceptive

Two type hormone of oral contraceptive

Classified into

1-Mono phasic

Two hormone in all tablet in the same conc.

Ex. Yasmin , Gynera, Diane 35



2- Bi phasic

Usual used to avoid side effect of estrogen as mood change

Which change conc. Of estrogen & progesterone as estrogen is high in the first & progesterone is high in the end

Ex. Gracial



3-Tri Phasic

Change conc. Each week

Ex. logynon







Contraceptive

Some hormonal drug contain anti androgenic as cyproterone other uses

Regulate period
Hirsutism
Acne
Yasmin tab. No weight gain
In mood change patient the better to use one hormone contraceptive

Drug – Drug interaction

Anti biotic …… increase liver metabolism
Antibiotic …… affect on normal flora
To over come used additional method plus probiotic as protexin





Contraceptive

Other contraceptive

1-Loop

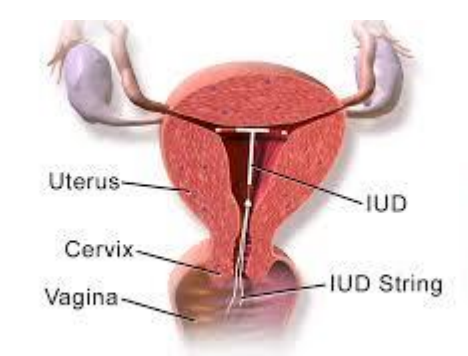
Classify into :

a- Hormonal ex. Mirena

To decrease side effect as decrease bleeding



b – Cupper loop ex. Nova .T



Intraunterine Device (IUD)



Common side effect

1- Bleeding
2-Low back pain
3-Pelvic infection (referral)





Contraceptive

Other contraceptive

2- Nuva ring



NuvaRing contains ethinyl estradiol and etonogestrel.

Both estradiol and etonogestrel are female hormones that prevent ovulation (the release of an egg from an ovary).

NuvaRing also causes changes in your cervical mucus and uterine lining, making it harder for sperm to reach the uterus and harder for a fertilized egg to attach to the uterus.

The NuvaRing vaginal ring is used as contraception to prevent pregnancy.

NuvaRing may also be used for purposes not listed in this medication guide.





Contraceptive

Other contraceptive

3-Condoms





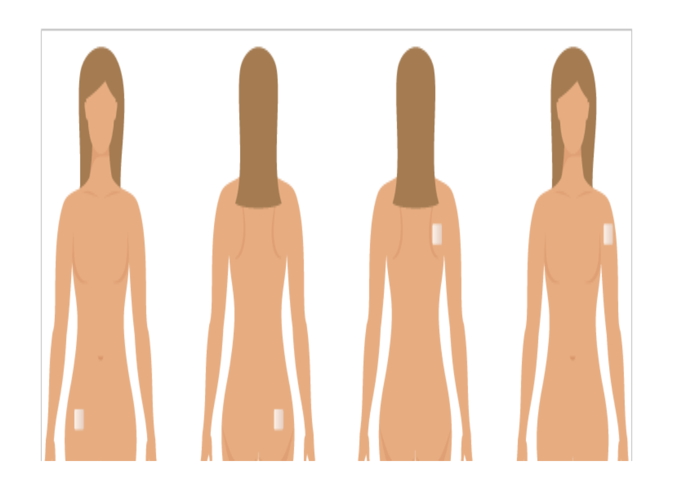


Contraceptive

Other contraceptive

4- Evra patch

Weekly Patch









Hormonal products

Drugs used in delay of menses

1- Primolut-N

Active ingredient : Norethisterone 5mg

Dose : one tablet 3 times daily start 3-5 days before the menses
& continuous up till finishing the target
If the period of treatment exceed 14 days increase the frequency to 4 times







Hormonal products

Drugs used in delay of menses



2- Duphaston

Active ingredient : Dydrogestrone

Dose : 2 tablet twice daily start 3-5 days before menses

Similar molecular structure & pharmacological effect of endogenous progesterone

No interaction with estrogen products therefore can be taken with estrogen containing products in postmenopausal women

It is orally active by lower dose

It is not harmful for pregnant but must be recommended also by physician & No effect on genital tract of female fetus





Hormonal products

Drugs used in delay of menses

2- Duphaston

It is free from estrogenic , androgenic ,anabolic & corticosteroids effect of other steroids or at least it is the less one

help in producing protein needs to maintain the pregnancy

Dose single or multiple not effect on pharmacokinetics & steady conc. After 3 day
Therefore can be take once or twice/ day





Contraceptive

Drugs used in delay of menses

2- Duphaston

Different indication :
Hormonal replacement therapy with estrogen to decrease the side effect of estrogen threatened abortion , dysfunctional uterine bleeding , premenstrual syndrome (PMS) , reestablish regular menstrual cycle by help restore natural hormone
Recommended dose for missed period 1*3 for 5 – 7 days

3- Oral Contraceptive (2 hormone) & Evra Patch & Nuva Ring

Delay the menses by continuous use





Contraceptive

Drugs used in missed period

Our roles is just advised to make urine analysis

Drugs include Primolut – N , Duphaston

Bleeding case

Managed by venotonic & haematonic







Contraceptive

Avoidance Method

Used in two cases
1- Decrease chance to pregnancy
2- Increase chance to pregnancy

This method depend on ovulation test

Luteal phase is 14 days but follicular phase 6-16 days
Ova life is 12-24 hrs. , sperm life is 24-48 hrs.
Average days is 3 days





Regulation of period cycle

Different group of drugs used in regulate the menses



Climen

Oral contraceptive 2H

Progyluton





Estrogen Supplement





Estrogen supplement used in treat different cases

1-Post Menopausal Syndrome

Symptoms of PMS

Hot Flashes
Insomnia
Weight Gain
Depression
Headache

Treatment

Angliq , climen , Femoston



2-Estrogen Receptor Modulator

Used in treat breast cancer & osteoporosis
Ex.Evista

3- Natural & herbal supplementation



Anti Prolactin Drugs

Include Parlodel, Dopergin , Dostinex , Norprolac

Different application :



Weaning

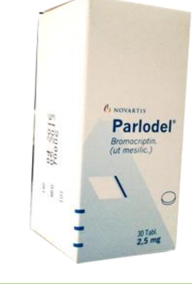
Infertility

Pituitary tumor



Parkinsonism (Parlodel , Dopergin)









Anti Prolactin Drugs

Dostinex

Lower than other in its side effect so that no need gradually increase in the dose

3 different uses with different dose



1- Inhibit prolactin release
Dose : 2 tablet one shot

2- Infertility (the reason is high conc. Of prolactin)
Dose : ½ - 1 tablet twice weekly

3- Weaning
Dose : ½ twice for two days ..continuous or seprate





Anti Prolactin Drugs

Other anti prolactin containing drugs prescribed in gradual dose

Beginning in the evening

Main side effect

Cardiovascular side effect as hypertension

GIT problem as constipation

CNS problem as hallucination





Testosterone Containing Drugs

Include Andriol , Testiverone

Different Application

1- Muscle building

2- Libido

3- Hypogonadism

4- Palliative treatment in breast cancer





Sexual Dysfunction Treatment

Sexual dysfunction include libido dysfunction , erectile dysfunction , premature ejaculation & low vitality

Libido

Group of drugs used in improve libido

In female *Aphrofem®* Capsules

Aphrofem significantly improves sexual activity through the following actions:

Aphrofem enhances libido (sexual urge or desire) by increasing the sensitivity of the sex hormone neuro-receptors to the circulating sex hormones in the body.

Aphrofem significantly enhances vaginal lubrication, through sexual arousal.

Aphrofem improves blood circulation throughout the body, including the genitalia.

DOSAGE

Taken one capsule by mouth three times a day after meals for 2-4 weeks until desired effects are achieved. The patient can then continue on a maintenance dose of 1-2 capsules daily.





Sexual Dysfunction Treatment

Libido

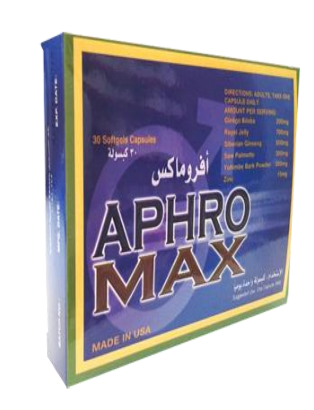
Group of drugs used in improve libido

In male (↑Endogenous Testosterone)

Afrodi-dal



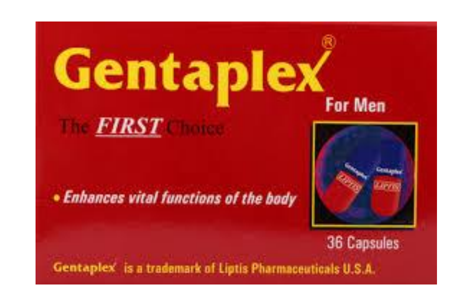
Aphro max



Exotique



Gentaplex



1 cap. 3-4 time for 4-8 week
1 cap. Once for maintain





Sexual Dysfunction Treatment

Erectile Dysfunction

Treated through increase the blood flow

Include 3 active ingredient sildenafil , tadalafil & verdnalfil(PDE5 inhibitor)

Sildenafil (Viagra , Vero, Erecta ,….)



Main side effect
Blurred vision , flushing , headache

Other application
Pulmonary hypertension

Duration of action
Up to 4 hrs.

Contra indicated
Hypertension patient treated by nitrate gp.
Congestive Hypertension





Sexual Dysfunction Treatment

Erectile Dysfunction





Tadalefil (Cialis , Snafi)

Main side effect
Low back pain

Other application
Smooth muscle relaxant in small dose (Cialis 5 mg)



Duration of action
Up to 36 hrs.

Contra indication
Hypertension patient treated by nitrate gp
Congestive Hypertension





Sexual Dysfunction Treatment

Erectile Dysfunction



Vardenafil (Levitra)

Main side effect
Rhinitis

Duration of action
usually lasts approximately 4 to 5 hours (similar to sildenafil)

Contra indication
Hypertension patient treated by nitrate gp
Congestive Hypertension
Prostatic patient treated by alpha blocker





Sexual Dysfunction Treatment

Premature Ejaculation

Drugs used in treat premature ejaculation include

Lejam 30mg & 60 mg

The usual dose is 30 mg.
May increase the dose to 60 mg.
Only take the medicine 1 to 3 hours before sexual

Herbal as st john's wort & Procalmil



SSRI

Lidocaine

Delay condom



Sexual Dysfunction Treatment

Power & Vitality drugs

Ginseng



Royal Jelly



Ginkobiloba



Multivitamin





Weaning Management

For baby

1- Bitter almond oil
2- Mebo oint.

} Apply for nipple



3- Milk





4- Food







Weaning Management

For Mother

1- Negative feed back mechanism

2- Cold compress





4- NSAIDS

5- Breast pad







Drugs used in treat prostate problem

Different drugs used in treat prostate problem include

1-Decongestion drug (Decongestyl supp.)



2- Alpha blocker classify into 2 group

1st group non selective α- blocker (Cardura , Itrin , Xatral XL)





2nd group selective α- blocker (Omnic ocas 0.4)





Drugs used in treat prostate problem

Different drugs used in treat prostate problem include

3-α-Reductase Inhibitor (Proscar , Avodart)





4-Herbal drug (Prostaguard , Prosta health , Mepapon)







Drugs used in treat prostate problem

Risk factor for prostatic problem

1- Age
2-Family history
3-Obesity

Symptoms

Difficulty starting a urine stream (hesitancy and straining).
Decreased strength of the urine stream (weak flow).
Dribbling after urination.
Feeling that the bladder is not completely empty.
An urge to urinate again soon after urinating.
Pain during urination (dysuria).
Waking at night to urinate (nocturia).
Frequent urination .
A sudden, uncontrollable urge to urinate.
Pain in anal region .

Prostatic infection should treat in acute state to avoid infertility 4-6 week long term



Anti Androgenic Drugs

Spironolactone (Aldactone)



Cyproterone (Diane 35 , Androcure)





Used in treat different disease as

1-Androgenic Alopecia
2-Hirutism
3-Acne
4-poly cystic ovary
5-used to decrease libido in elder patient



Drugs used in treat Osteoporosis

Osteoporosis usually in women (in post menopausal women) due to decrease estrogen

Treatment of Osteoporosis

1- Control turn over of bone (miacalcic)

2-Increase bone mass by two mechanism

1st decrease osteoclast



Alendronate Na(Fosamax,Osteve, …)weekly , Ibandronic acid(Bonviva)monthly



Patient counselling

Take *at least* one-half hour before the first food, beverage, or medication of the day with plain water only

Patients should not lie down for at least 30 minutes

2nd increase osteoblast

Calcium , vit D (Osteocare , Caltrate –D ,….)





Patient Education

1-Exposure to the sun

2-Exercise 3- Vit . D supplement

4-Milk product as Ca supplement

5-Supplement containing Ca, phosphorous, vit.D, Element as Zn,Mg,Boron

6- Adjust the weight



Drugs used in obesity

How can decrease the weight ??

1- Change life style

- ✓ Exercise
- ✓ Food (Vegetable ,..)
- ✓ Increase no. of meals but decrease quantity
- ✓ Avoid eating at night



2-Drugs

A. Decrease appetite

- Bulk (Mucivital)



- Enhance satiety (Satiety)







Drugs used in obesity

2-Drugs

A. Decrease appetite
B. Decrease absorption





- Fat ….. Orlistat (Xenical), Formaline ,Fatache, Neupentia, Chitocal

Main side effect of Xenical :fat droplet

Long term use (decrease oil soluble vitamins KEDA)



- Carbohydrate … Glucosanol ,Chitocal , Metformin





C. Increase fat burning
   HI chrome , Supercitrimax , Cupaline

D. Purgative drugs ….توبستا شاي و شاي الضيافه



Drugs used in obesity

3-Support treatment of obesity



Sweetener



Anticelluite , firming



Sauna



Weight scale





Drugs used in increase the weight

1-Increase the appetite



Mosegor , pericatin , multivitamin rich in group of vitamin B

2- High energy , High protein product

Ensure , Pediasure , Weight gain program

3-Treat the cause as indigestion , worm infestation

Anorexia ….treated by psychologist





Thank You

